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T070425

1. Location of Reading Room: Idaho Operations Public Reading Room 1776 Science Center Dr. University Place Idaho Falls, ID 83403		2. Expected Release Date: May 15, 1995										
3. Document Type: <table border="0"><tr><td><input type="checkbox"/> Letter</td><td>a. If letter or memo:</td></tr><tr><td><input type="checkbox"/> Memorandum</td><td>To:</td></tr><tr><td><input checked="" type="checkbox"/> Report</td><td>From:</td></tr><tr><td><input type="checkbox"/> Publication</td><td>Subject:</td></tr><tr><td><input type="checkbox"/> Other (Specify)</td><td></td></tr></table> b. If report: Title: MONTHLY ACTIVITY REPORT - ANALYTICAL CHEMISTRY BRANCH - MAY 21, 1969 - JUNE 20, 1969			<input type="checkbox"/> Letter	a. If letter or memo:	<input type="checkbox"/> Memorandum	To:	<input checked="" type="checkbox"/> Report	From:	<input type="checkbox"/> Publication	Subject:	<input type="checkbox"/> Other (Specify)	
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4. Document Date: June 23, 1969	c. If publication: Name: Volume: Issue:											
5. Summary (2-3 lines indicating the major subject(s) of the document): Report on the routine study of biological samples, water samples and ecological samples; whole body counts; chemical interference studies in the combined Ra, Ac & Th procedure; on a method of determination of Sr 90 in presence of Sr 89 by liquid scintillation counting; and the new paper published.												
6. Name and telephone number of person completing form: Anjan K. Majumder (208) 525-0206	7. Organization: Lockheed Idaho Technologies Co.	8. Date: MAY, 1995										

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HUMAN RADIATION EXPERIMENTS

RECORDS PROVENANCE FORM

REPOSITORY NAME		INEL
* COLLECTION NAME	ORIGINAL NAME	RESL READING FILES / MONTHLY ACTIVITY REPORTS
	NEW NAME	RADIOLOGICAL AND ENVIRONMENTAL SCIENCES LABORATORY, FILES OF DOUG CARLSON, DIRECTOR
BOX NUMBER		BOX # 1
ADDITIONAL LOCATION INFORMATION		RESL, CFA-690, ROOM # 102, ON THE FLOOR FOLDER: MONTHLY ACTIVITY REPORT- ANALYTICAL CHEMISTRY BRANCH, 1958 - 1972
FILE TITLE		MONTHLY ACTIVITY REPORT - ANALYTICAL CHEMISTRY BRANCH - MAY 21, 1969 - JUNE 20, 1969
TOTAL PAGES		
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DOCUMENT TITLE: MONTHLY ACTIVITY REPORT - ANALYTICAL CHEMISTRY
BRANCH - MAY 21, 1969 - JUNE 20, 1969

CROSS REFERENCES:

ITEMS OF INTEREST:

* A NEW COLLECTION NAME REPLACED THE ORIGINAL DUE TO
REORGANIZATION OF RECORD SERIES

REPOSITORY INEL
RESL READING FILES
COLLECTION MONTHLY ACTIVITY REPORTS
BOX No. 1, RESL CFA 690 Room #102
MONTHLY ACTIVITY REPORTS -
FOLDER ANALYTICAL CHEMISTRY BRANCH
1958 - 1972

June 23, 1969

George L. Voelz, M.D., Director
Health Services Laboratory

MONTHLY ACTIVITY REPORT - ANALYTICAL CHEMISTRY BRANCH
May 21, 1969 - June 20, 1969

ROUTINE

Biological Samples (urine, feces, soil, etc.)	437
Water Samples (potable, effluent, etc.)	686
Air & Dusts (carbon cartridges, filters, etc.)	643
Whole Body Counts	77

RESEARCH

Research was continued on the following: Combined Ra, Th, and Ac Procedure by determining decontamination factors for U 233; raising yields to 99% of Po 210 by deposition of Ag discs; combined analyses of Am, Cm, and Cf in various sample types.

Research on a method for determination of Sr 90 in the presence of Sr 89 by liquid scintillation counting was continued with a study of the effect of Y 90 ingrowth on the calculation of Sr 90-Sr 89. The maximum time after the chemical separation of Y 90 and the time the sample could be counted with essentially no effect from the Y 90 ingrowth was found to be approximately 20 hours.

Continued Rn 222 research. Obtained further evidence that 1-2% of the Rn from a 10^4 pCi standard adsorbed on 10 grams of activated charcoal remains on the charcoal even after purging at 500 °C with 40 liters of N₂.

The research of directly depositing samples on a stainless steel plate with 0.2 mg of cerous hydroxide was continued. Direct filtration of the cerous hydroxide on a 47 mm vinyl Matricel filter gave a resolution of approximately 70 keV. A direct evaporation of cerous hydroxide in a water solution gave a resolution of from 50 to 65 keV. A new method employing sodium hydroxide is now being used; after centrifuging and drying, a spectrum of the plate gave a resolution of from 30 to 40 keV.

Many different radionuclides were investigated for possible use in the human studies program. Preparation methods, dose rendered, chemical toxicity, and predicted distribution were studied.

The rotational whole body counter was recalibrated with the sources distributed throughout the body. Work is continuing in application of computer techniques to gamma spectrometry and whole body counting in particular.

SPECIAL ACTIVITIES

Jesse I. Anderson presented a paper entitled "A Whole Body Counter With Rotating Detectors" at the 14th Annual Meeting of the Health Physics Society held in Pittsburgh, Pa., June 9-12, 1969.

This paper has also been published in the June, 1969 (Vol. 16, No. 6) issue of Health Physics. Authors are Jesse I. Anderson, DeRay Parker, and Dale G. Olson.

Dale Olson attended the A.S.T.M. Sub-Committee Meeting June 16-20 in Philadelphia, Pa. He also participated in preparing radiochemical methods for analyzing water samples.

WHOLE BODY COUNTING ACTIVITIES

Whole body counts at the Laboratory were as follows: 25 routine, 22 termination and 30 others.

Claude W. Sill, Chief
Analytical Chemistry Branch
Health Services Laboratory